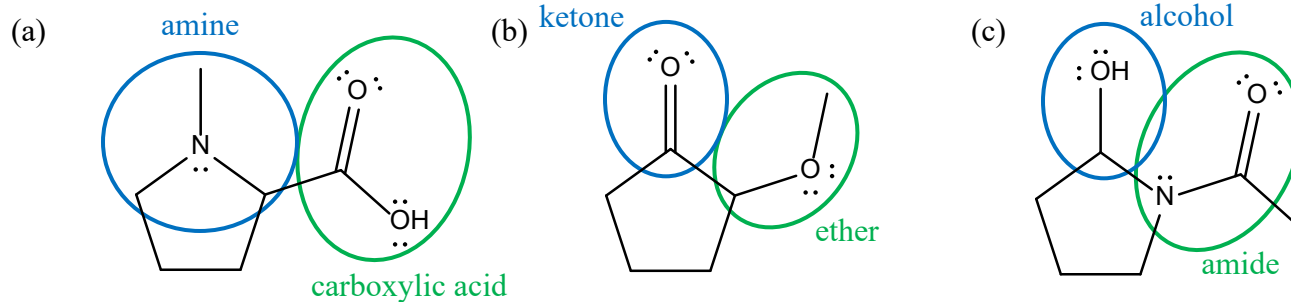


Answers to Exercise 10.3

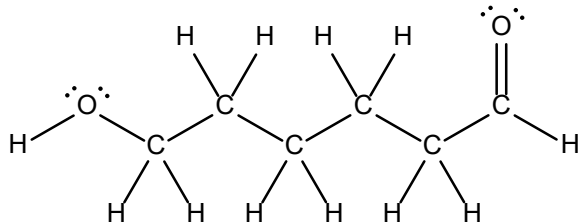
Functional Groups

1.

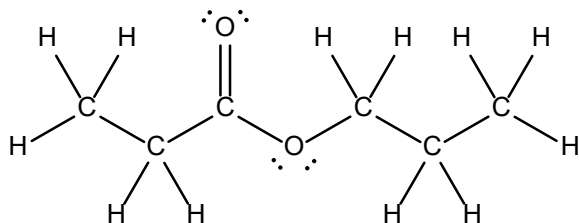


2. *Representative answers are provided; however, there are many possible correct answers.*

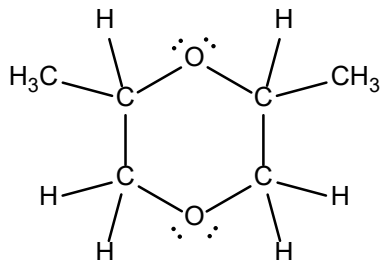
(a) Your answer must include a $C = O$ group in which the C is attached to H and to C.



(b) Your answer must include a $C = O$ group in which the C is attached to O with a C on the other side. The other atom attached to the C of the $C = O$ group must be H or C.

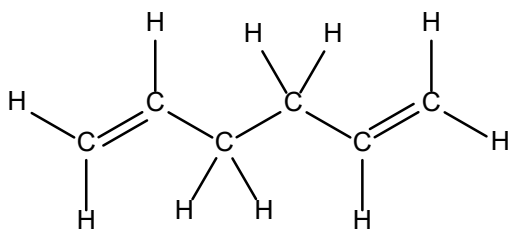


(c) Your answer must include at least one O that is bonded to two C; neither of those C can be part of a $C = O$ group. To make the molecular formula work, your answer will contain either one ring or one double bond.

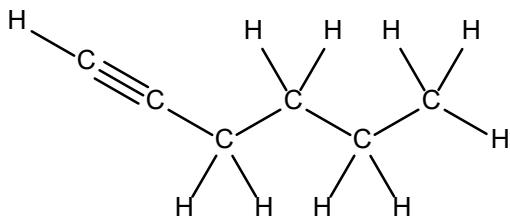


3. *Representative answers are provided; however, there are many possible correct answers.*

(a) Your answer must contain at least one $C = C$ group. It will either contain a second $C = C$ or a ring.

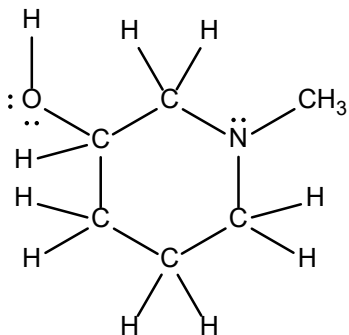


(b) Your answer must contain a $C \equiv C$ group. It will not contain any other pi bonds or rings.



4. *Representative answers are provided; however, there are many possible correct answers.*

(a) Your answer must contain a nitrogen atom bonded to three atoms, each of which are C or O. None of the C may be part of a $C = O$ group.



(b) Your answer must contain a $C = O$ group in which the C is bonded to N.

